No. 777,906. PATENTED DEC. 20, 1904.

F. A. LANE.

TOY SAVINGS BANK.

APPLICATION FILED AUG. 10, 1903.

NO MODEL.

Fig. 1.

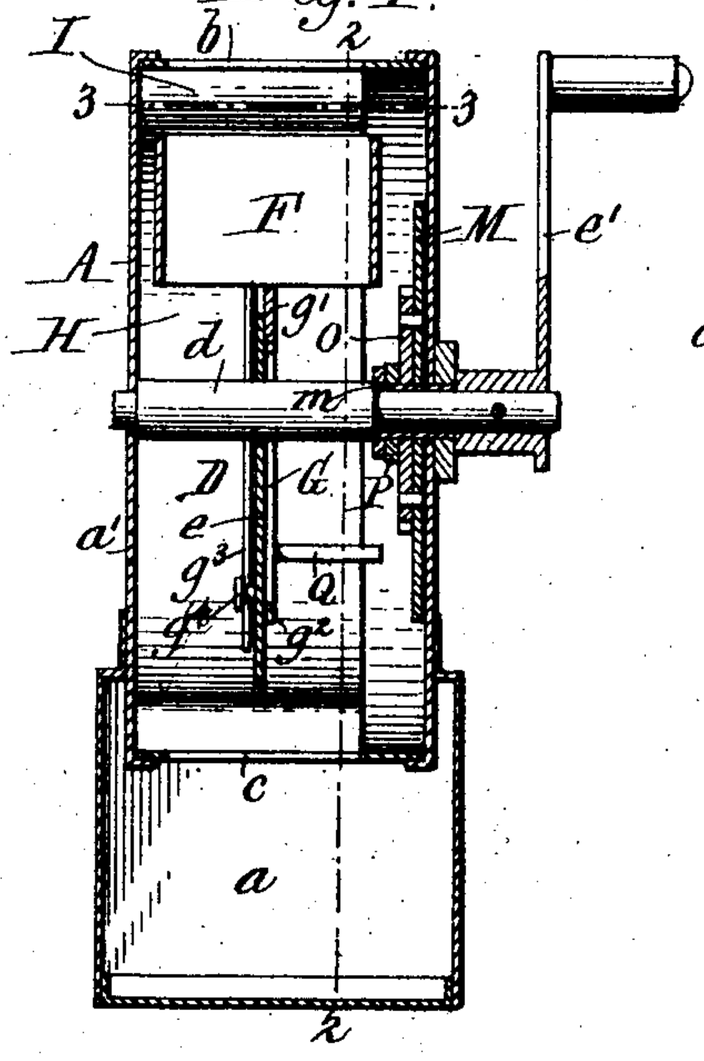


Fig. 2.

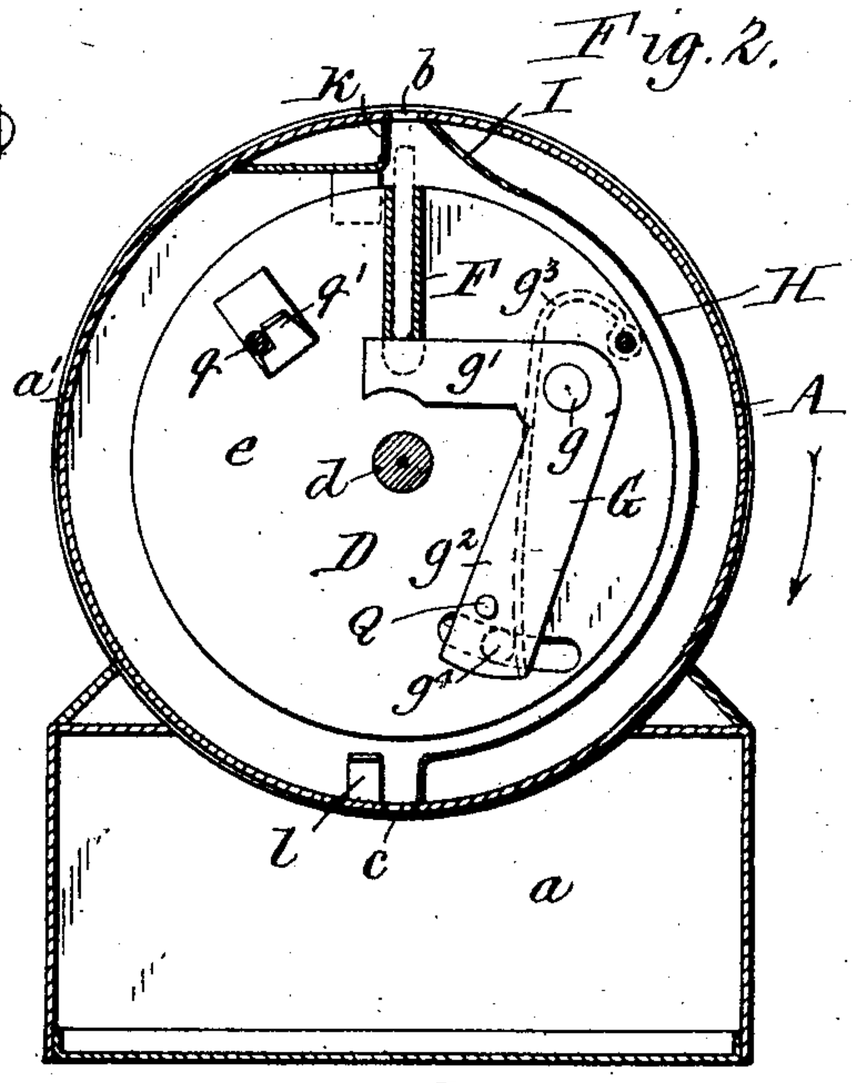


Fig. 3.

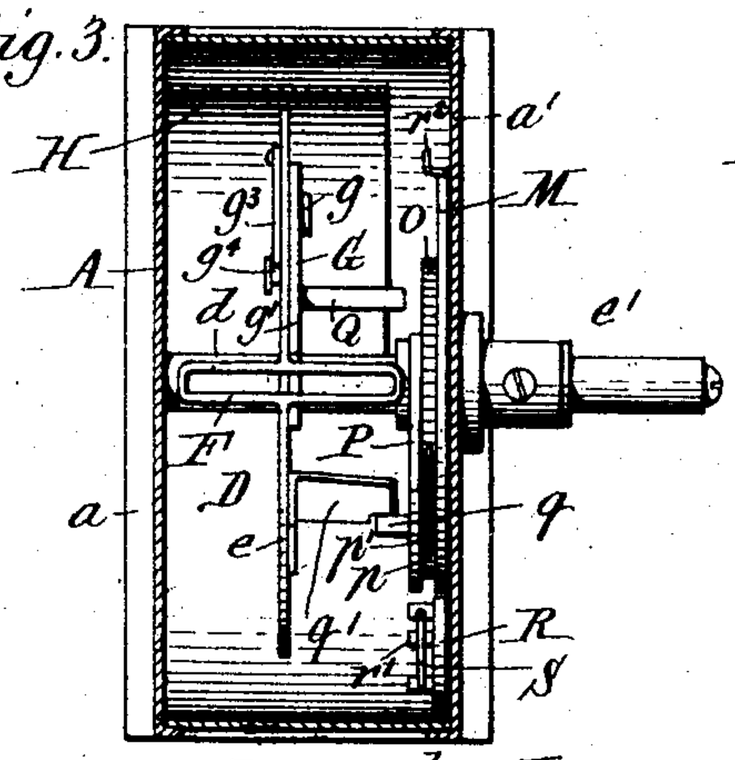


Fig. 4.

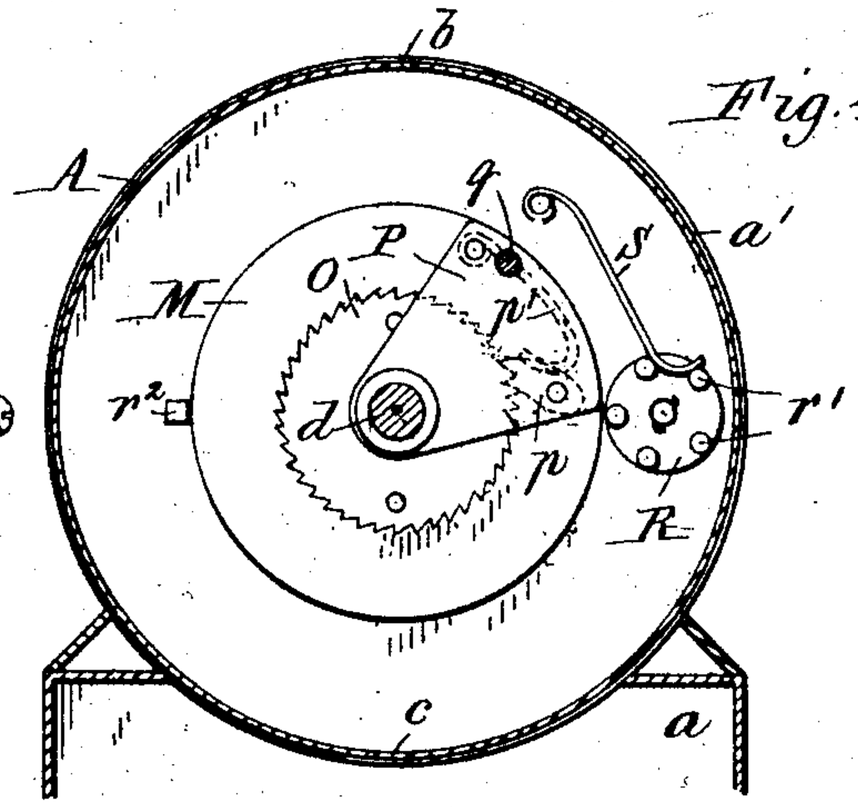


Fig. 5.

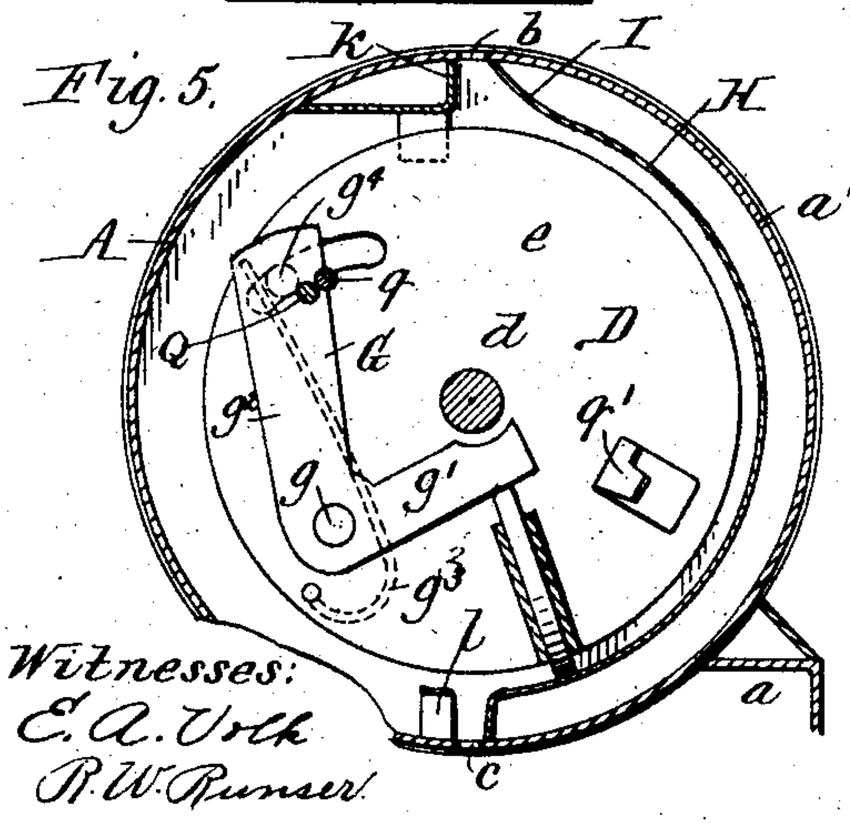
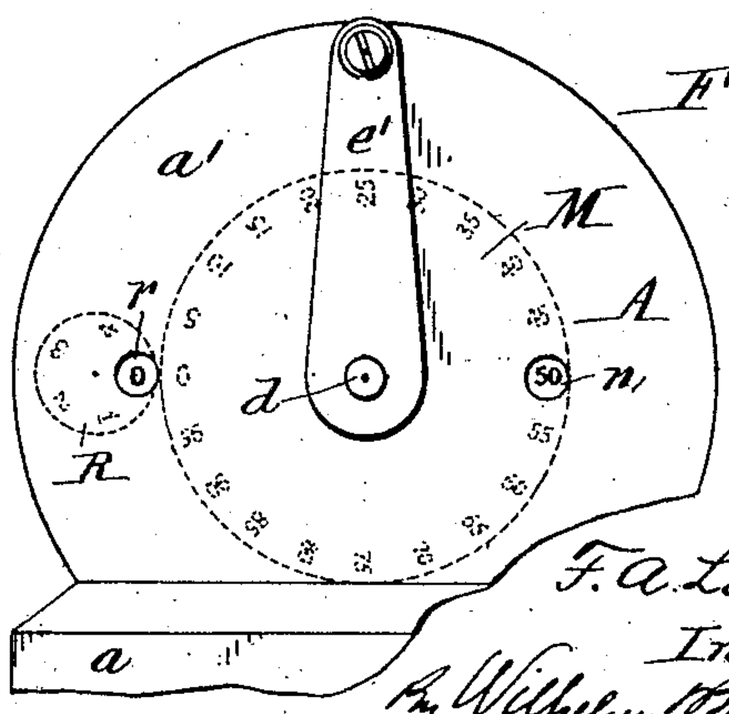


Fig. 6.



Witnesses:
E. A. Volk
R. W. Runser.

F. A. Lane
Inventor.
By Wilhelm Bonnell
Attorneys.

No. 777,906. Patented December 20, 1904.

UNITED STATES PATENT OFFICE.

FREDERIC A. LANE, OF LITTLEFALLS, NEW YORK, ASSIGNOR TO D. H. BURRELL & COMPANY, OF LITTLEFALLS, NEW YORK.

TOY SAVINGS-BANK.

SPECIFICATION forming part of Letters Patent No. 777,906, dated December 20, 1904.

Application filed August 10, 1903. Serial No. 168,888.

To all whom it may concern:

Be it known that I, FREDERIC A. LANE, a citizen of the United States, and a resident of Littlefalls, in the county of Herkimer and State of New York, have invented a new and useful Improvement in Toy Savings-Banks, of which the following is a specification.

This invention relates to a toy savings-bank which is provided with a mechanism for registering the amount of money placed in the bank.

The bank, with the exception of the registering mechanism, is of the same general character as that described in my United States Letters Patent, dated July 21, 1903, No. 734,268, and comprises an inclosing casing having a coin-chamber or till, a hand-actuated rotatable or oscillating coin-carrier inclosed in said casing and provided with a coin pocket or holder into which the coin is inserted through a slot in the casing when the coin-carrier is in the receiving position, and an ejecting device which discharges the coin from the coin-carrier into the coin-chamber when the carrier is turned to the discharging position.

The objects of this invention are to provide a registering toy savings-bank which is very simple and inexpensive in construction, which is strong and not easily broken or gotten out of order by careless handling, and in which the registering mechanism is operated positively by a hand-actuated device.

In the accompanying drawings, Figure 1 is a longitudinal sectional elevation of a bank embodying the invention. Fig. 2 is a transverse sectional elevation thereof in line 2 2, Fig. 1, looking toward the rear of the bank. Fig. 3 is a horizontal section in line 3 3, Fig. 1, showing the coin-carrier and registering mechanism in plan. Fig. 4 is a fragmentary sectional elevation looking toward the front part of the bank. Fig. 5 is a fragmentary sectional elevation similar to Fig. 2, showing a different position of the coin carrier. Fig. 6 is a fragmentary front elevation of the bank.

Like letters of reference refer to like parts in the several figures.

A represents the inclosing casing, which is provided with a till or chamber *a* for the coin and above the same with a cylindrical portion *a'*, which incloses the rotary coin-carrier and is provided in the upper portion of its cylindrical wall with a coin-slot *b* and in the lower portion thereof with an opening *c*, through which the coins are discharged from the coin-carrier into the coin-chamber.

D represents the rotatable or oscillating coin-carrier, which is mounted in the upper cylindrical portion *a'* of the casing, and consists of a shaft *d*, journaled in bearings on the opposite upright walls of the casing, and a circular disk or plate *e*, secured to the shaft. The front end of the shaft projects through the front wall of the casing and is provided with a crank or handle *e'* for turning the carrier. The carrier-disk is provided near its periphery with a radial coin pocket or holder F, arranged parallel with the shaft and having open inner and outer ends. The pocket is of less depth than the diameter of the coin for which the bank is intended to be used, so that the inner edge of the coin when forced into the pocket will project beyond the inner open end thereof.

G represents the ejecting-lever for forcibly propelling the coin from the pocket of the carrier into the coin-chamber when the carrier is in the discharging position with the pocket opposite the discharge-opening *c*. The ejecting-lever is preferably of elbow form and is pivoted at *g* on the disk *e* and has one arm, *g'*, extending across the inner open end of the coin-pocket, so as to be engaged by the inner edge of a coin in the pocket. The other arm, g^2, is engaged by a spring g^3, secured to the disk *e* and bearing with its free end against a pin g^4, whereby the arm *g'* is yieldingly pressed toward the coin-pocket.

H represents a stationary curved shield which is secured to or formed on the cylindrical portion of the casing and extends from one side of the coin-slot *b* to the adjacent side of the discharge-opening *c* for preventing the coin from dropping out of the coin-pocket of the coin-carrier until the latter registers with the discharge-opening.

I represents a cam-face which inclines inwardly from the coin-slot to the curved shield

and is preferably though not necessarily formed by an outwardly-bent portion of the curved shield.

k and *l* represent stops on the casing, against which the pocket of the coin-carrier or other suitable part thereof strikes to arrest the carrier in the receiving and discharging positions.

When a coin is inserted in the pocket of the coin-carrier through the coin-slot *b* and the carrier is turned to the right, as indicated by the arrow in Fig. 2, the protruding edge of the coin strikes the cam-face I, and the coin is thereby forced into the pocket, its inner edge engaging the adjacent arm of the ejecting-lever G and moving the same inward against the action of its spring. The ejecting-lever holds the coin outwardly against the curved shield H, and when the coin-carrier reaches the discharging position the coin disengages the end of the shield and is projected by the spring-pressed ejecting-lever out of the pocket through the discharge-opening into the coin-chamber.

The parts above mentioned may be arranged and constructed as fully described in my said patent or in any other suitable manner.

The registering mechanism is constructed as follows: M represents a flat register wheel or disk arranged inside of the casing, adjacent to the front wall thereof and preferably journaled to rotate on a bearing-sleeve *m*, in which the shaft of the coin-carrier turns in the front wall of the casing. The register-wheel is provided with a circular series of numbers, (indicated by dotted lines in Fig. 6,) which are successively exposed to view through an opening *n* in the front wall of the casing. The register-wheel is turned one step, or the distance between two adjacent numbers, upon each actuation of the coin-carrier by the following mechanism: O represents a ratchet-wheel secured to or formed on the register-wheel, and P a pawl lever or plate which is pivoted to swing or oscillate on the bearing-sleeve *m* beside the ratchet-wheel and is provided at its outer end with a pawl *p*, held yieldingly in contact with the teeth of the ratchet-wheel by a spring *p'*. The register-wheel and pawl-lever are confined on the bearing-sleeve between the front wall of the casing and a fixed collar at the inner end of the bearing-sleeve and are caused to bear with considerable friction against each other and the wall of the casing by swaging the end of the bearing-sleeve or otherwise. The frictional contact between the parts holds the register-wheel from play and accidental movement during the return movement of the pawl-lever. The pawl-lever is provided with a lateral pin or projection *q*, and the arm g^2 of the ejecting-lever is provided with a driving pin or projection Q, which projects toward the pawl-lever and in the normal position of the ejecting-lever moves in a circular path, in which it clears the pin *q* on the pawl-lever. When the coin-carrier is turned and the coin forced into the pocket by the cam-face I, the ejector-lever is turned on its pivot, whereby the driving-pin Q is moved outwardly or away from the axis of the coin-carrier to a position in which it will engage the pin on the pawl-lever and turn the latter with the carrier. The parts are so adjusted that the pawl-lever is moved far enough before the coin-carrier is arrested in the discharging position to turn the register-wheel the distance between two numbers, and thereby expose the next number.

q' represents a restoring pin or projection on the disk of the coin-carrier, which engages the pin on the pawl-lever and returns the latter to the initial position when the coin-carrier is returned to the receiving position for another coin. In the return movement of the pawl-lever the pawl rides over the teeth of the ratchet-wheel and at the next forward movement turns the register-wheel another step.

The numbers on the register-wheel are multiples of the amount represented by the coin for which the bank is intended, so that the number exposed indicates the amount of money contained in the bank. For instance, the bank illustrated in the drawings is intended for five-cent pieces and the numbers on the register-wheel are multiples of five. Different register-wheels having appropriate numbers can be provided for banks intended for different coins, or similar wheels can be employed for different coins, representing values which are multiples of the value of the coin for which the bank is intended. Thus the register-wheel illustrated can be employed to register the amounts when dimes, quarters, or half-dollars are used by setting the driving-pin Q to move the pawl-lever and register-wheel distances sufficient to expose the second, fifth, or tenth numbers at successive operations of the coin-carrier.

The register-wheel M is preferably intended to register fractions of a dollar only, and a second register-wheel R is provided for registering the dollars. The dollar-wheel is journaled on a stud projecting from the front wall of the casing adjacent to the periphery of the fraction register-wheel M and is provided with a circular series of numbers adapted to be exposed to view through an opening *r* in the front wall of the casing. The dollar-wheel is provided with projections or the like *r'*, and the fraction register-wheel is provided with a projection or part r^2, adapted upon each complete revolution thereof to engage one of the projections on the dollar-wheel and move the latter one step or a distance sufficient to expose the next number thereon.

S is a spring secured to the casing and bearing against two adjacent projections *r'* on the dollar-wheel for yieldingly holding the latter in the position to which it is moved by the projection on the fraction-wheel.

The two register-wheels operate in a well-known manner to indicate in dollars and cents the amount of money which has been introduced into the bank.

I claim as my invention—

1. In a savings-bank, the combination of a casing provided with a coin-slot, a rotatable coin-carrier having a coin-holder adapted to register with said coin-slot in the receiving position of the coin-carrier, coin-registering mechanism, means for forcing the coin into the holder by the rotation of the coin-carrier, and an actuating device for the registering mechanism on said coin-carrier and which is moved by the coin into position to operate the registering mechanism, substantially as set forth.

2. In a savings-bank, the combination of a casing provided with a coin-chamber and a coin-slot, a rotatable coin-carrier mounted in said casing and provided with a pocket adapted to register with said coin-slot in the receiving position of said coin-carrier, coin-registering mechanism, an actuating device for said registering mechanism which is movably mounted on said coin-carrier, and means for engaging and forcing the coin into the coin-pocket by the rotation of the coin-carrier to move said actuating device into operative position to operate said registering mechanism, substantially as set forth.

3. In a savings-bank, the combination of a casing provided with a coin-chamber and a coin-slot, a rotatable coin-carrier mounted in said casing and provided with a coin-pocket adapted to register with said coin-slot in the receiving position of said coin-carrier, coin-registering mechanism including one or more registering-wheels, means for rotating said wheels, an actuating device for said registering mechanism movably mounted on said coin-carrier, and a stationary device for engaging and moving the coin to shift said actuating device by the rotation of said coin-carrier into position to engage said means for rotating said registering-wheels, substantially as set forth.

4. In a savings-bank, the combination of a casing provided with a coin-chamber and a coin-slot, a coin-carrier rotatably mounted in said casing and having a coin-pocket adapted to register with said slot in the receiving position of said carrier, registering mechanism including an operating ratchet-and-pawl mechanism, an actuating device for said ratchet-and-pawl mechanism movably mounted on said coin-carrier, and means for forcing the coin into said pocket by the movement of said coin-carrier to move said actuating device into position to operate said ratchet-and-pawl mechanism, substantially as set forth.

5. In a savings-bank, the combination of a casing provided with a coin-chamber and a coin-slot, mechanism for registering the amount of the coins, a hand-actuated coin-carrier provided with a coin-pocket which registers with said slot in the receiving position of said coin-carrier, an ejecting device which is moved by the coin and which acts to discharge the coin in the discharging position of the carrier, and an actuating device for said registering mechanism connected to said ejecting device, substantially as set forth.

6. In a savings-bank, the combination of a casing provided with a coin-slot, coin-registering mechanism, a hand-actuated coin-carrier provided with a coin-pocket which registers with said slot in the receiving position of the coin-carrier, an actuating device for said registering mechanism mounted on said coin-carrier and which is moved by the coin into position to operate the registering mechanism and which acts to eject the coin from the coin-carrier when the latter is in discharging position, substantially as set forth.

7. In a savings-bank, the combination of a casing provided with a coin-slot, coin-registering mechanism, a hand-actuated rotatable coin-carrier provided with a coin-pocket which registers with said coin-slot in the receiving position of the coin-carrier, an actuating-lever for said registering mechanism which is pivoted on said coin-carrier and is moved by the coin into position to operate the registering mechanism and which acts to eject the coin from the coin-carrier when the latter is in discharging position, substantially as set forth.

8. In a savings-bank, the combination of a casing provided with a coin-slot, coin-registering mechanism, a hand-actuated rotatable coin-carrier into which the coin is inserted through said slot when the coin-carrier is in receiving position, an actuating device for said registering mechanism mounted on the coin-carrier, and means for engaging the coin and shifting said actuating device when the coin-carrier is moved, said actuating device also acting to eject the coin from the coin-carrier when the latter is in discharging position, substantially as set forth.

9. The combination of a rotatable coin-carrier having an open-ended coin-pocket disposed transversely of the plane of movement of the coin-carrier, an elbow-lever pivoted on said carrier and having one arm arranged opposite to the open inner end of the coin-pocket, a driving projection on the other arm of said lever, a pawl-arm having a projection which is engaged by said driving projection when the lever is shifted by the coin, a pawl on said arm, and a registering mechanism actuated by said pawl, substantially as set forth.

Witness my hand this 7th day of August, 1903.

FREDERIC A. LANE.

Witnesses:
GRIFFITH PRICHARD,
FRANK A. TINKER.